IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended): A computer program product comprising computer-executable instructions for causing a computer to:

obtain performance data related to performance of a broadband network; ~~and~~

provide a hierarchical display of network performance, the hierarchical display including a first level with first data indicative of network operation and a second level with second data indicative of a plurality of issues comprising the first level of network performance[[;]]_,_

wherein the second level includes multiple issues that contain a third level with third data indicative of network issues comprising at least some of the secondary level issues[.]_;_ and

provide an indication of a likely network problem and suggest action for addressing the likely network problem.

2. (Original): The computer program product of claim 1 wherein the first data are indicative of overall performance of one of the network, and a selected portion of the network.

3. (Original): The computer program product of claim 2 wherein the first data are indicative of overall performance of the network and the issues at the second level include at least one of connectivity and traffic.

4. (Cancelled).

5. (Currently Amended): The computer program product of claim [[4]] 1 ~~wherein the more detail includes~~ further comprising instructions for causing the computer to provide at least one of ~~locations~~ location of network elements associated with the selected level, and metrics corresponding to the network elements and associated with at least one issue comprising the selected level.

6. (Currently Amended): The computer program product of claim 5 further comprising instructions for causing the computer to provide ~~more detail regarding~~ a selected portion of ~~the more detail~~ at least one of locations location of network elements associated with the selected level, and metrics corresponding to the network elements and associated with at least one issue comprising the selected level, provided of issues comprising a selected level.

7. (Currently Amended): The computer program product of claim 5 further comprising instructions for causing the computer to sort ~~the more detail~~ at least one of locations location of network elements associated with the selected level, and metrics corresponding to the network elements and associated with at least one issue comprising the selected level according to at least one selected criterion.

8. (Cancelled).

9. (Original): The computer program product of claim 1 wherein the collected data are metrics of network performance derived from raw data indicative of network activity.

10. (Original): The computer program product of claim 9 further comprising instructions for causing the computer to derive the metrics from the raw data.

11. (Currently Amended): ~~The computer program product of claim 10 wherein the instructions for causing the computer to derive the metrics include instructions for causing the computer to:~~

A computer program product comprising computer-executable instructions for causing a computer to:

obtain performance data related to performance of a broadband network;

provide a hierarchical display of network performance, the hierarchical display including a first level with first data indicative of network operation and a second level with second data indicative of a plurality of issues comprising the first level of network performance,

wherein the second level includes multiple issues that contain a third level with third data indicative of network issues comprising at least some of the secondary level issues, the computer program product further comprising instructions for causing a computer to obtain first metrics of performance of at least a portion of the broadband network; and

combine a plurality of first metrics into a second metric of network performance indicative of a higher-level of network performance than indicated by the first metrics. .

12. (Original): The computer program product of claim 11 wherein the instructions for causing the computer to combine the first metrics by weighting different metrics differently dependent upon perceived relevance of an issue associated with the metric to network performance.

13. (Currently Amended): ~~The computer program product of claim 10 wherein the instructions for causing the computer to derive the metrics include instructions for causing the computer~~

A computer program product comprising computer-executable instructions for causing a computer to:

obtain performance data related to performance of a broadband network; and

provide a hierarchical display of network performance, the hierarchical display including a first level with first data indicative of network operation and a second level with second data indicative of a plurality of issues comprising the first level of network performance,

wherein the second level includes multiple issues that contain a third level with third data indicative of network issues comprising at least some of the secondary level issues, the computer program product further comprising instructions for causing a computer to perform comparisons of first metrics derived from the raw data with thresholds and to provide second metrics based upon the comparisons.

14. (Original): The computer program product of claim 13 wherein the second metrics provide indicia of grades of degraded performance of portions of the network as a function of time.

15. (Original): The computer program product of claim 1 wherein the hierarchical display is independent of an amount of network elements contributing to the indicia of network performance.

16. (Original): The computer program product of claim 15 wherein the second data are indicative of network issues perceived to affect network performance more than network issues absent from the display.

17. (Original): The computer program product of claim 1 wherein the displayed data associated with levels provide indicia of absolute performance of portions of the network associated with the respective levels.

18. (Original): The computer program product of claim 1 wherein the displayed data associated with a level provide indicia of relative performance of portions of the network associated with the respective levels.

19. (Original): The computer program product of claim 18 wherein the displayed data associated with levels provide indicia of absolute performance of portions of the network associated with the respective levels.

20. (Original): The computer program product of claim 19 further comprising instructions for providing a display of the data associated with levels over time.

21. (Cancelled).

22. (Original): The computer program product of claim 1 wherein the first and second data provide indicia of grades of degradation of performance of at least portions of the network as a function of time.

23. (Original): The computer program product of claim 22 wherein the network is a DOCSIS network including cable modems and cable modem termination systems, and the first and second data indicate numbers of cable-modem hours at the grades of degradation.

24-32 (Cancelled).

33. (Currently Amended): A method, comprising:

obtaining performance data related to performance of a broadband network; and

providing a hierarchical display of network performance, the hierarchical display including a first level with first data indicative of network operation and a second level with second data indicative of a plurality of issues comprising the first level of network performance,

wherein the second level includes multiple issues that contain a third level with third data indicative of network issues comprising at least some of the secondary level issues[.]; and

providing an indication of a likely network problem, and a suggested action for addressing the likely network problem.

34. (Previously Presented): The method of claim 33, wherein the first data are indicative of overall performance of one of the network, and a selected portion of the network.

35. (Previously Presented): The method of claim 34, wherein the first data are indicative of overall performance of the network and the issues at the second level include at least one of connectivity and traffic.

36. (Cancelled).

37. (Currently Amended): The method of claim ~~36~~ 33, further comprising: ~~wherein the more detail includes~~ at least one of locations of network elements associated with the selected level, and metrics corresponding to the network elements and associated with at least one issue comprising the selected level.

38. (Currently Amended): The method of claim 37, further comprising:

providing ~~more detail regarding~~ a selected portion ~~of the more detail provided of issues comprising a selected level~~ of at least one of locations of network elements associated with the selected level, and metrics corresponding to the network elements and associated with at least one issue comprising the selected level.

39. (Currently Amended): The method of claim 37, further comprising:

sorting ~~the more detail~~ at least one of locations of network elements associated with the selected level, and metrics corresponding to the network elements and associated with at least one issue comprising the selected level according to at least one selected criterion.

40. (Cancelled).

41. (Previously Presented): The method of claim 33, wherein the collected data are metrics of network performance derived from raw data indicative of network activity.

42. (Previously Presented): The method of claim 41, further comprising:

deriving the metrics from the raw data.

43. (Currently Amended): The method of claim 42, wherein ~~said step~~ of deriving the metrics comprises:

obtaining first metrics of performance of at least a portion of the broadband network; and

combining a plurality of first metrics into a second metric of network performance indicative of a higher-level of network performance than indicated by the first metrics.

44. (Currently Amended): ~~The method of claim 43,~~ A method, comprising:

obtaining performance data related to performance of a broadband network; and providing a hierarchical display of network performance, the hierarchical display including a first level with first data indicative of network operation and a second level with second data indicative of a plurality of issues comprising the first level of network performance, wherein

the second level includes multiple issues that contain a third level with third data indicative of network issues comprising at least some of the secondary level issues,

obtaining first metrics of performance of at least a portion of the broadband network, and

combining a plurality of first metrics into a second metric of network performance indicative of a higher-level of network performance than indicated by the first metrics,

wherein said step of combining the first metrics comprises:

weighting different metrics differently depending upon perceived relevance of an issue associated with the metric to network performance.

45. (Currently Amended): ~~The method of claim 42, said step of deriving the metrics comprises:~~

A method, comprising:

obtaining performance data related to performance of a broadband network; providing a hierarchical display of network performance, the hierarchical display including a first level with first data indicative of network operation and a second level with second data indicative of a plurality of issues comprising the first level of network performance, wherein

the second level includes multiple issues that contain a third level with third data indicative of network issues comprising at least some of the secondary level issues,

obtaining first metrics of performance of at least a portion of the broadband network; and

combining a plurality of first metrics into a second metric of network performance indicative of a higher-level of network performance than indicated by the first metrics, and

performing comparisons of first metrics derived from the raw data with thresholds; and

providing second metrics based upon the comparisons.

46. (Previously Presented): The method of claim 45, wherein the second metrics provide indicia of grades of degraded performance of portions of the network as a function of time.

47. (Previously Presented): The method of claim 33, wherein the hierarchical display is independent of an amount of network elements contributing to the indicia of network performance.

48. (Previously Presented): The method of claim 47, wherein the second data are indicative of network issues perceived to affect network performance more than network issues absent from the display.

49. (Previously Presented): The method of claim 33, wherein the displayed data associated with levels provide indicia of absolute performance of portions of the network associated with the respective levels.

50. (Previously Presented): The method of claim 33, wherein the displayed data associated with a level provide indicia of relative performance of portions of the network associated with the respective levels.

51. (Previously Presented): The method of claim 50, wherein the displayed data associated with levels provide indicia of absolute performance of portions of the network associated with the respective levels.

52. (Previously Presented): The method of claim 51, further comprising:

displaying the data associated with levels over time.

53. (Cancelled).

54. (Previously Presented): The method of claim 33, wherein the first and second data provide indicia of grades of degradation of performance of at least portions of the network as a function of time.

55. (Previously Presented): The method of claim 54, wherein the network is a DOCSIS network including cable modems and cable modem termination systems, and the first and second data indicate numbers of cable-modem hours at the grades of degradation.

56-66 (Cancelled).

67. (New): A computer program product comprising computer-executable instructions for causing a computer to:

obtain performance data related to performance of a broadband network;

provide a hierarchical display of network performance, the hierarchical display including a first level with first data indicative of network operation and a second level with second data indicative of a plurality of issues comprising the first level of network performance;

wherein the second level includes multiple issues that contain a third level with third data indicative of network issues comprising at least some of the secondary level issues, and

said instruction to provide a hierarchical display includes an instruction to obtain indicia of cumulative amounts of time that network elements of at least a desired portion of a broadband network were considered at corresponding qualities of network performance during a designated time frame; and

instructions to display the cumulative amounts in a hierarchy of network issues, the hierarchy including a summary category including summary values indicating total cumulative amounts of time that the network elements in the at least a desired portion of the network were considered at corresponding qualities of performance, the hierarchy further comprising a plurality of sub-categories contributing to the summary category, and the

subcategories each further comprising at least one sub-sub-category contributing to the sub-categories.

68. (New): The computer program product of claim 67 wherein the summary values indicate total cumulative amounts of time that all the network elements in the at least a desired portion of the network were considered at corresponding qualities of performance.

69. (New): The computer program product of claim 67 further comprising instructions for causing the computer to indicate that categories contributing to a higher-level category are one of direct contributors and indirect contributors to the higher-level category.

70. (New): The computer program product of claim 67 further comprising instructions for causing the computer to display additional information regarding a selected category of cumulative amounts.

71. (New): The computer program product of claim 70 further comprising instructions for causing the computer to display further additional information regarding selected additional information.

72. (New): The computer program product of claim 67 further comprising instructions for causing the computer to determine network areas that are most-negatively contributing to network performance.

73. (New): The computer program product of claim 72 further comprising instructions for causing the computer to recommend action, regarding at least one of the network areas

that are most-negatively contributing to network performance, for improving network performance.

74. (New): The computer program product of claim 72 further comprising instructions for causing the computer to implement action, regarding at least one of the network areas that are most-negatively contributing to network performance, for improving network performance.

75. (New): The computer program product of claim 67 wherein the instructions for causing the computer to obtain indicia of cumulative amounts of time that network elements cause the computer to access a storage area containing the indicia.

76. (New): A method, comprising:

obtaining performance data related to performance of a broadband network;

providing a hierarchical display of network performance, the hierarchical display including a first level with first data indicative of network operation and a second level with second data indicative of a plurality of issues comprising the first level of network performance, wherein

the second level includes multiple issues that contain a third level with third data indicative of network issues comprising at least some of the secondary level issues, and

said providing a hierarchical display includes obtaining indicia of cumulative amounts of time that network elements of at least a desired portion of a broadband network were considered at corresponding qualities of network performance during a designated time frame; and

displaying the cumulative amounts in a hierarchy of network issues, the hierarchy

including a summary category including summary values indicating total cumulative amounts

of time that the network elements in the at least a desired portion of the network were

considered at corresponding qualities of performance, the hierarchy further comprising a

plurality of sub-categories contributing to the summary category, and the sub-categories each

further comprising at least one sub-sub-category contributing to the sub-categories.

77. (New): The method of claim 76, wherein the summary values indicate total

cumulative amounts of time that all the network elements in the at least a desired portion of

the network were considered at corresponding qualities of performance.

78. (New): The method of claim 76, further comprising:

indicating that categories contributing to a higher-level category are one of direct

contributors and indirect contributors to the higher-level category.

79. (New): The method of claim 76, further comprising:

displaying additional information regarding a selected category of cumulative

amounts.

80. (New): The method of claim 79, further comprising:

displaying further additional information regarding selected additional information.

81. (New): The method of claim 76, further comprising:

determining network areas that are most-negatively contributing to network

performance.

82. (New): The method of claim 81, further comprising:

recommending action, regarding at least one of the network areas that are most-

negatively contributing to network performance, for improving network performance.

83. (New): The method of claim 81, further comprising:

implementing action, regarding at least one of the network areas that are most-

negatively contributing to network performance, for improving network performance.

84. (New): The method of claim 76, wherein said step of obtain indicia of cumulative

amounts of time that network elements comprises:

accessing a storage area containing the indicia.

85. (New): An apparatus, comprising:

means for obtaining performance data related to performance of a broadband network;

means for providing a hierarchical display of network performance, the hierarchical

display including a first level with first data indicative of network operation and a second

level with second data indicative of a plurality of issues comprising the first level of network

performance, wherein

the second level includes multiple issues that contain a third level with third data

indicative of network issues comprising at least some of the secondary level issues, and

said means for providing a hierarchical display includes means for obtaining indicia

of cumulative amounts of time that network elements of at least a desired portion of a

broadband network were considered at corresponding qualities of network performance

during a designated time frame; and

means for displaying the cumulative amounts in a hierarchy of network issues, the

hierarchy including a summary category including summary values indicating total

cumulative amounts of time that the network elements in the at least a desired portion of the

network were considered at corresponding qualities of performance, the hierarchy further

comprising a plurality of sub-categories contributing to the summary category, and the

subcategories each further comprising at least one sub-sub-category contributing to the

subcategories.